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(74) Agent: **HAMMER, Catriona, MacLeod**, Amersham Plc,  
Amersham Place, Little Chalfont, Buckinghamshire HP7  
9NA (GB).

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(71) Applicant (*for all designated States except US*): **AMER-  
SHAM BIOSCIENCES UK LIMITED** [GB/GB]; Amer-  
sham Place, Little Chalfont, Buckinghamshire HP7 9NA  
(GB).

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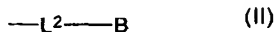
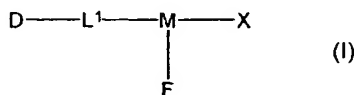
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(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **COTTON, Graham**  
[GB/GB]; Albachem Limited, Elvington Science Centre,  
By Gladsmuir, Lothian EH13 1EH (GB).

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ning of each regular issue of the PCT Gazette.*

(54) Title: SITE-SPECIFIC LABELLING OF PROTEINS USING ACRIDONE AND QUINACRIDONE LIFETIME DYES



(57) Abstract: Disclosed are compounds of formula: (I) In which D is a fluorescent dye selected from an acridone and a quinacridone dye; F comprises a target bonding group selected from a carboxylic acid thioester group and a 1,2-aminothiol group; M is a group adapted for attaching to F; X is selected from hydrogen or the group: (II), wherein B is an affinity tag; and L<sup>1</sup> and L<sup>2</sup> each independently comprise a group containing from 1 to 40 linked atoms selected from carbon atoms which may optionally include one or more groups selected from -NR<sup>1</sup>, -O-, -CII=CII-, -CO-NH- and phenylenyl groups, where R<sup>1</sup> is selected from hydrogen and C<sub>1</sub> - C<sub>4</sub> alkyl. The invention also relates to methods that afford direct attachment of the acridone or quinacridone dye to either the N-terminus or C-terminus of a synthetic or recombinant peptide or protein, and their derivatives, in a site-specific manner, coupled with purification of the resultant labelled molecule. Site-specific protein on peptide labelling involves the reaction of a thioester group with a 1,2-aminothiol group as for native chemical ligation.

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